

REMARKS

Claims 1-53 remain in the application. Claims 1-53 are rejected. Claims 1, 11, 24, 29, 31, 36, 37, 41, 51 and 53 have been amended. Applicants respectfully request reconsideration of the rejections set forth in this Office Action in light of the following remarks.

Amendments to the Specification

The paragraphs added to the specification are identical to paragraphs in U.S. application 09/619,848, which was incorporated by reference in the present application. The incorporation by reference is made at the bottom of page 12 at line 31 in the last paragraph on the page.

Rejections under 35 U.S.C. § 112

For the convenience of the Examiner, further references to the specification are cited in regards to the publication corresponding to this application, U.S. Pub no. 20020185937.

In regards to claims 1-53, Examiner states, "since a polymer has little or no rigidity, it appears that electrical actuation of the polymer would result merely in a bending distortion of the polymer with no relative movement (expansion) between its ends and no movement of the crank pin." For the purposes of clarification, claims 1, 11, 24, 31 and 37 have been amended and the rejection is believed overcome thereby.

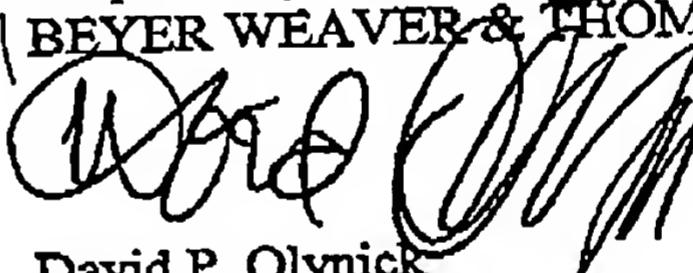
Examiner has stated that "contrary to some claims (e.g., 4 and 33) the electroactive element is parallel to the axis (#503), but written and illustrated embodiments show only a perpendicular relationship." Applicant believes a parallel relationship is at least described with respect to FIG. 3D and paragraph 119 of U.S. Pub no. 20020185937.

Examiner has stated that "It is also undisclosed how an external load provides increases an elastic strain in the electroactive polymer, or how deflection of the polymer can be independent of elastic potential energy."

In regards, how an external load provides increases in elastic strain, Applicant believes FIGs. 2B and 2C and the corresponding description show how an external load provides an increase in elastic strain. Paragraph 47 also states, "The mechanical forces include elastic restoring forces of the polymer 102 material, the compliance of electrodes 104 and 106, and any external resistance provided by a device and/or load coupled to the transducer portion 100, etc." For the purposes of clarification, claims 29, 36 and 51 have been amended and the rejection is believed overcome thereby.

In regards to how the deflection of the polymer can be independent of elastic potential energy, Applicant believes this concept is described at least with respect to paragraph 150 and with respect to FIGs. 3G and 3H (see paragraphs 123-130).

Applicant believes that all pending claims are allowable and respectfully requests a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,
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